```
(12) is located inside the roof lining.
        USE - Motor vehicles.
        ADVANTAGE - Can be pre-assembled, easy and low-cost fabrication,
    permits generation of different climatic zones within vehicle.
        DESCRIPTION OF DRAWING(S) - Figure shows section through part of
    roof module.
        outer roof skin (2)
        inner lining (2')
        hollow bodies (3,4)
        foam padding (5)
        stiffeners (10,11)
        air mixer (12)
        air intakes/outlets (18)
        vehicle interior (19)
        pp; 5 DwgNo 1/2
Title Terms: ROOF; MODULE; MOTOR; VEHICLE; CONSIST; OUTER; THIN; WALL; ROOF
   SKIN; INTERNAL; LINING; TWO; INTERNAL; HOLLOW; BODY; STIFFEN; PURPOSE;
  SUPPLY; AIR; VEHICLE; INTERIOR
Derwent Class: Q12; Q17
International Patent Class (Main): B60R-013/02
International Patent Class (Additional): B60H-001/24
File Segment: EngPI
?ss pn=de 10022902
               1 (PN=DE 10022902)
      S2
?t s2/9/all
 2/9/1
DIALOG(R) File 351: Derwent WPI
(c) 2002 Thomson Derwent. All rts. reserv.
013707389
             **Image available**
WPI Acc No: 2001-191613/200119
XRPX Acc No: N01-136150
  Covering or molded element with high absorbing effect for use in vehicle
  components; has at least one microperforated film absorber and either at
  least one absorber of foam or fleece or space
Patent Assignee: CLION IRLAND LTD (CLIO-N); HP-CHEM PELZER RES & DEV LTD
  (HPCH-N)
Inventor: CHUONG D; NICOLAI N; FUCHS H V
Number of Countries: 095 Number of Patents: 004
Patent Family:
                             Applicat No
                                             Kind
                                                    Date
                                                             Week
Patent No
              Kind
                     Date
                             WO 2000EP7459
WO 200112470
                   20010222
                                             Α
                                                  20000802
                                                            200119
               A1
                                                  20000511
DE 10022902
               A1
                   20010308
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                                                            200121
                             AU 200066988
                                                  20000802
                                                            200134
AU 200066988
               Α
                   20010313
                                             Α
EP 1202874
                   20020508
                             EP 2000954582
                                                  20000802
                                                            200238
                                             Α
               Α1
                             WO 2000EP7459 A
                                                  20000802
Priority Applications (No Type Date): DE 1022902 A 20000511; DE 1038005 A
  19990811
Patent Details:
Patent No Kind Lan Pg
                         Main IPC
                                     Filing Notes
WO 200112470 A1 G 26 B60R-013/08
   Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA
   CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP
   KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT
   RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
   Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR
   IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW
                       B60R-013/08
DE 10022902
              A1
                                     Based on patent WO 200112470
                       B60R-013/08
AU 200066988
              Α
              A1 G
                       B60R-013/08
                                     Based on patent WO 200112470
EP 1202874
   Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT
   LI LT LU LV MC MK NL PT RO SE SI
Abstract (Basic): WO 200112470 A1
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NOVELTY - Element has at least one microperforated film absorber

and either at least one absorber that consists of foamed or non-woven material or clearance at space from reverberant wall. Preferably the perforation component of film absorber is 0.3%-2% and the holes have one or more diameters of 0.1-0.8 mm and one or more hole spacings of 1-3 mm. Several film absorbers with different hole diameters and spacings may be used. USE - For all parts of vehicle (Claimed). ADVANTAGE - High absorption over relatively broad frequency band. DESCRIPTION OF DRAWING(S) - The figure shows a transmission tunnel with different hole sizes in the microperforated film absorber (Drawing contains non-English language text). Metal (Metall) Microperforation hole size 1 (Mikroperforation Lochgroesse 1) Microperforation hole size 2 (Mikroperforation Lochgroesse 2) pp; 26 DwgNo 1/3 Title Terms: COVER; MOULD; ELEMENT; HIGH; ABSORB; EFFECT; VEHICLE; COMPONENT; ONE; FILM; ABSORB; ONE; ABSORB; FOAM; FLEECE; SPACE Derwent Class: P86; Q17 International Patent Class (Main): B60R-013/08 International Patent Class (Additional): B60R-013/02; G10K-011/16 File Segment: EngPI ?ss pn=de 19847795 S3 1 PN=DE 19847795 ?t s3/9/all 3/9/1 DIALOG(R) File 351: Derwent WPI (c) 2002 Thomson Derwent. All rts. reserv. 013147404 \*\*Image available\*\* WPI Acc No: 2000-319276/ 200028 XRAM Acc No: C00-096966 XRPX Acc No: N00-239543 Production of roof-reinforcing, internal cladding for vehicles, passes soft foam through resin to adhere it to coverings and linings when hot-pressed to form lighter, stronger rigid molding with high dimensional stability Patent Assignee: JOHNSON CONTROLS HEADLINER GMBH (JOHN-N) Inventor: BODWING F; HAERTLING P; KOENIGER U; LOUIS D Number of Countries: 025 Number of Patents: 002 Patent Family: Applicat No Kind Patent No Date Kind Date C1 20000504 DE 1047795 19981016 DE 19847795 Α A1 20000503 EP 99120456 19991014 200028 EP 997265 Priority Applications (No Type Date): DE 1047795 A 19981016 Patent Details: Patent No Kind Lan Pg Main IPC Filing Notes DE 19847795 C1 6 B62D-025/06 B32B-005/18 A1 G EP 997265 Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI Abstract (Basic): **DE 19847795** C1 NOVELTY - A foamed panel or band of material (14) is wetted or saturated with a resin material (28) adherent to two covering layers (16, 18), between which it is then sandwiched. Hot pressing in a mold (40), produces the required hardened roof contour. DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for the

corresponding reinforced roof internal cladding.

Preferred features: The foam is passed through a bath of the resin, then through a calender with adjustable nip (30), pressing out surplus. Covering layers are added. The composite passes through a second calender (34), before reaching the hot pressing mold, where hardening and bonding are completed. Between first and second calenders, the foam is wetted with catalyst, which mixes with the resin in passing through the second nip, becoming distributed over the entire width. This accelerates hardening during hot pressing. The foam is 5-10 mm thick